

REMARKS

Review and reconsideration on the merits are requested.

Status of Claims

Claims canceled in the past: 1-2, 8-10, and 20-21.

Currently amended: 3-7, 11 and 22.

Previously presented: 6, 12-19.

The Prior Art

U.S. 6,586,087 Young; U.S. 6,362,119 Chiba (Chiba); U.S. 6,323,108 Kub (Kub).

The Rejections

Claims 3-4, 7, 14-15, 18-19 and 22 under 35 U.S.C. §102(a) as anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Young. See paragraphs 1-4 of the Action.

Claims 3-4, 7, 14-15, 18-19 and 22 under 35 U.S.C. §102(a) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Chiba. See Paragraphs 5-10 of the Action.

Claims 5-6, 11-13 and 16-17 (although claims 1-3 are referred to in the Action, it appears clear that claims 11-13 are met) under 35 U.S.C. §103(a) as being unpatentable over Chiba in view of Kub. See Paragraphs 12-19 of the Action.

These rejections are respectfully traversed in the order presented.

The Examiner's reading and application of the prior art is set forth in the Action, and will not be repeated here except as necessary to an understanding of Applicants' traversal which is now presented.

Anticipation/Obviousness over Young - Paragraphs 1+ of the Action

Young relates to a copper aluminosilicate glass composition stated to be useful as a sealing material for borosilicate glasses or glasses having medium coefficient of thermal

expansion. The copper aluminosilicate glass composition as described in Young comprises 2 to 33 wt% of CuO as an essential component, as calculated on an oxide basis in weight percent. Young is silent regarding the presence or content of Zr (zirconium) (col. 5, lines 27 to 38). The Examiner's attention is directed to the fact that claims 3 and 4 and claims which depend therefrom are specific to the Si-Zr-group materials, i.e., these claims and claims which depend therefrom mandate the presence of Zr.

In distinction to the utility in Young, the corrosion resistant member of the present application is used for CVD (Chemical Vapor Deposition) devices, plasma treatment devices, plasma etching devices, and the like, used in manufacturing of semiconductors, etc., and, in particular, relates to a member having high corrosion resistance to corrosive gases or plasma and also high heat-resistance.

In the member for use in the parent application, it is of practical great importance that any element which may diffuse into a device to be treated such as a semiconductor and exert a harmful influence on the properties of the semiconductor is not present in the member. For example, as described in Laura Peters Ed., Semiconductor International, 23(5), 89-94 (May 2000), "copper can diffuse into the active device areas, causing either a threshold shift or leakage". (page 90, left-hand col., lines 7 to 10). From such knowledge, one skilled in the art would know that when a member containing copper is used as a member for semiconductor manufacturing devices, which is an application of the present application, product yield would be deteriorated by diffusion of copper and the like. Accordingly, the member of the present application is not the same as the glass as described in Young and is not obvious over the glass as described in Young.

In order to clarify that the member of the present application does not contain copper, Applicants' amend "containing" to --consisting essentially of-- in claims 3, 4, 7 and 22 to thereby further distinguish Young.

Withdrawal is requested.

Anticipation/Obviousness Rejection over Chiba - Paragraphs 5+ of the Action

Chiba relates to a barium borosilicate glass which contains no lead, bismuth or cadmium and which has a softening point and a coefficient of expansion suitable for e.g., insulating pastes for electronic parts, materials for sealing electronic parts, color pastes for automobile windows and glazes for dishes.

Chiba describes at col. 3, lines 16 to 20, certain requirements for the glass as described in Chiba, i.e., (i) B_2O_3 is a network former and essential and (ii) the softening point tends to be too high in the case where B_2O_3 is less than 5%. Chiba further clarifies this point at col. 2, lines 17 to 19 in stating "that the Chiba glass preferably has a softening point by a differential thermal analysis of 600 to 800°C.

In distinction, in the member of the present application, a network is formed without B_2O_3 , and the softening point of the member of the present application is at least 1000°C depending upon the composition, as described on page 9, lines 13 to 16 in the specification of the present application. Accordingly, the member of the present application is essentially different from the glass of Chiba and is not obvious over the glass of Chiba (the working example is silent about the softening point).

Considering all of the above, to clarify that the member of the present application does not contain B_2O_3 , Applicants amend "containing" to --consisting essentially of-- in claims 3, 4, 7 and 22. Withdrawal is requested.

Obviousness Rejection over Chiba in view of Kub - Paragraphs 12+ of the Action

Kub relates to a method of fabricating ultra-thin bonded semiconductor layers. Kub describes interlayers comprising SiO₂ as the ultra-thin layers, and describes silicon wafers as layers on and beneath the ultra-thin layers. Accordingly, the ultra-thin bonded semiconductor layers are quite different from the glass which constitutes the member of the present invention.

In distinction to Kub, Chiba does not describe any structure having an interlayer. Further, the applications in Chiba are insulating pastes for electronic parts, materials for sealing electronic parts, color pastes for automobile windows, glazes for dishes, and the like. A careful review of Chiba shows utility might be, for example, (col. 2, lines 10-16) overcoat pastes, crossover pastes, multi-layer insulating pastes and overcoat pastes. Noting that Kub does not specifically suggest the use of a glass similar to that suggested in Chiba for any purpose, Applicants respectfully submit that Kub is so different from Chiba that one of ordinary skill in the art would not be led to modify Chiba in view of Kub or Kub in view of Chiba.

Again, Applicants wish to emphasize the use of “consisting essentially of” this time in claims 5 and 11 to avoid the rejection over Chiba in view of Kub.

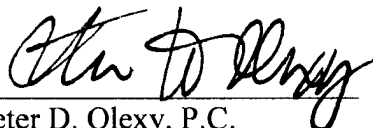
Withdrawal is requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

A copy of Semiconductor International, 89-94 (May 2002), Ed. Peters, L. is submitted herewith and listed on the attached PTO/SB/08.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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